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Policy options and actions for expediting progress in implementation: chemicals

Report of the Secretary-General

Summary

Ensuring the sound management of chemicals is an important element of achieving the Millennium Development Goals. The global production of, trade in and use of chemicals are increasing, placing increasing chemicals management demands on developing countries. The approach to chemicals management needs to be much better informed by a life cycle and sustainable development perspective that takes into account the multiple social, economic and environmental dimensions of the impacts of chemicals on human well-being. The focus of future policy options with respect to chemicals management should be on mainstreaming sound management into national development planning processes based on the Millennium Development Goals; strengthening regulations and legislation to improve chemical safety and to prevent and reduce risks; enhancing the accessibility and sharing of information; promoting alternatives to toxic chemicals; strengthening the means of implementation, including the mobilization of financial resources at all levels from both the public and private sectors; fostering partnerships among all stakeholders; and strengthening the international policy and legal framework and the enabling environment for achieving the goal of sound chemicals management.

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I. Introduction

1. At its eighteenth session, the review session of the fourth implementation cycle, 2010-2011, the Commission on Sustainable Development conducted an evaluation of progress achieved on the thematic issue of chemicals, as described in Agenda 21, the Programme for the Further Implementation of Agenda 21 and the Johannesburg Plan of Implementation.[1] The Commission also identified constraints and obstacles, as well as new challenges and opportunities, with regard to implementation in the thematic area of chemicals.

2. At its nineteenth session, the policy session of its current implementation cycle, the Commission will make decisions on policy options and practical measures to expedite implementation in the thematic area of chemicals. The session will be preceded by an Intergovernmental Preparatory Meeting, at which a draft negotiating document will be prepared for consideration by the Commission.

3. The present report is a contribution to the discussion to be held at the Intergovernmental Preparatory Meeting on policy options and practical actions to expedite progress on the sound management of chemicals. It responds to the challenges and obstacles highlighted in the report of the Commission on its eighteenth session (E/2010/29-E/CN.17/2010/15). The report was jointly prepared by the Department of Economic and Social Affairs and the United Nations Environment Programme (UNEP). It benefited from inputs provided by Governments, major groups and entities of the United Nations system, in particular the Strategic Approach to International Chemicals Management, the Inter-Organization Programme for the Sound Management of Chemicals,[2] the Stockholm Convention on Persistent Organic Pollutants, the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, and the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal.

4. Ensuring sound chemicals management is an important element of achieving the Millennium Development Goals, including the Goal on poverty eradication, given the critical linkages between chemical production and use and the major sectors of developing economies, including agriculture, health care, energy and industry. The main message of the eighteenth session of the Commission on Sustainable Development was that significant but insufficient progress has been made in sound chemicals management at all levels. Serious incidents still occur, and chemicals still have negative impacts on both human health and the environment. Much remains to be done to achieve the World Summit on Sustainable Development 2020 goal on sound chemicals management.

5. The global production of, trade in and use of chemicals are increasing, with growth placing an increasing chemicals management burden on developing countries. As a result, significant changes are needed in the way in which societies

[1] See E/2010/29-E/CN.17/2010/15.

[2] The Inter-Organization Programme for the Sound Management of Chemicals brings together nine intergovernmental organizations actively involved in chemical safety: the Food and Agriculture Organization of the United Nations, the International Labour Organization, the United Nations Development Programme, UNEP, the United Nations Industrial Development Organization, the United Nations Institute for Training and Research, the World Health Organization, the World Bank and the Organization for Economic Cooperation and Development.

manage chemicals. Owing to the very nature of chemicals, future action must be approached from a sustainable development perspective.

6. Making changes to unsustainable patterns of production and consumption was considered in the Johannesburg Plan of Implementation, inter alia, as a cross-cutting and overarching objective of and an essential requirement for sustainable development. From the perspective of a life cycle approach, there are strong intersections between sound chemicals management and sustainable consumption and production patterns, including in such areas of action as the mainstreaming of practices aimed at corporate social and environmental responsibility; responsible advertising; marketing and consumer information tools, including labelling and certification; and efforts to scale up the work of consumer groups.

II. Policies for the sound management of chemicals

A. Governance

7. The importance of the sound management of chemicals for sustainable development is not sufficiently recognized by countries. As a result, chemicals management is not sufficiently integrated into national development strategies and plans. In many developing countries, activities for sound chemicals management are not a priority in development policies and are therefore underfunded. A similar situation is found in the development assistance policies of donor countries.

8. Chemicals management is a cross-sectoral issue that involves a number of Ministries in national Governments, together with a wide range of stakeholders. It remains a challenge to foster cooperation among various actors at both the national and international levels to ensure coherence, consistence and resource efficiency.

9. In many countries, the governance structure comprising national legal and institutional infrastructures for chemicals management is fragmented or incomplete, with inconsistent involvement by the local authorities. There is a lack of national coordinating frameworks engaging relevant stakeholders in chemicals management, including the implementation of international agreements and processes.

10. Another challenge is the continued lack of implementation of the Rio principles concerning sustainable development in the area of chemicals management. In the global effort to phase out hazardous chemicals, developing countries need more support from the international community in reshaping their economies towards sustainable development.

11. If they are to be fully effective, policy options and measures on chemicals management should address the full policy chain of decision-making, from identifying problems by assessing their root causes to proposing a coherent package of solutions. This will require a comprehensive regulatory and institutional framework, rather than only technology-oriented measures. The policy options regarding governance for sound chemicals management should include:

(a) Making sound chemicals management a priority in the broad context of development and environment strategies. If the awareness of decision makers is to be raised concerning the importance of chemicals management for sustainable development, more guidance needs to be made available on how to link sound

chemicals management to health and poverty alleviation, how to measure and value linkages and impacts, how to conduct assessments in a systematic manner, how to integrate such assessments into sectoral development plans and poverty reduction strategies, and how to address specific problems with strong linkages to development, including malaria control and the application of certain pesticides;

(b) Establishing or strengthening national coordinating frameworks engaging all relevant agencies and stakeholders in sound chemicals management, including the implementation of international agreements and processes, through a cross-sectoral, participatory and partnership-based set of interventions to promote the proactive management of harmful substances and hazardous waste, and to avoid potential problems rather than just respond to negative impacts once they have occurred;

(c) Evaluating and strengthening legal and institutional infrastructures at the national level to ensure a coherent and efficient administrative system. In particular, there is a need to focus on the enforcement of laws and regulations;

(d) Strengthening the institutional capacity of national Governments to develop legislative and regulatory systems for the environmentally sound management of hazardous chemicals, including effective frameworks for chemical accident prevention and preparedness;

(e) Linking the health-care and environmental sectors to address chemical safety and risk prevention and reduction, and utilizing the offices of the World Health Organization (WHO) to strengthen coordination at the national and regional levels;

(f) Implementing the Rio principles including common but differentiated responsibility, the precautionary approach, the "polluter pays" principle and the internalization of environmental costs, and developing economic instruments to promote the sound management of chemicals throughout their life cycle.

Key components of a governance framework for sound chemicals management

- Constitutional provision (health, quality of life, the environment, sustainable development)
- Enabling policy and legislative framework
- Mechanism for national coordination
- National plans and priorities
- Participation by stakeholders, including women, indigenous communities, workers and other vulnerable groups
- National infrastructure and governmental institutional capacity for risk assessment and management
- Basic information for risk management, to inform decision-making and for tracking progress, such as:
  - Information on chemicals imported, manufactured, formulated, in transit or traded

– Clinical, epidemiological and environmental data

– Toxicity, fate, distribution and exposure pathways

- National monitoring strategy to support assessment and basic information for decision-making and the monitoring of human populations, food (including animal feeds) and the environment (including air, water, soil, sediment, flora and fauna)
- Risk communication strategies for awareness-raising and outreach, and education to support risk prevention and reduction (accessible, timely and appropriate information, including that applicable to vulnerable groups)
- Support for research
- Financial resources

Source: *UNDP Technical Guide for Integrating the Sound Management of Chemicals in MDG-Based Policies & Plans*, 2009.

B. Information-sharing

12. Information exchange and effective communication throughout the life cycle of chemicals are key to enabling users to avoid exposure to hazardous chemicals and to managing risks to users and the environment. Progress has been made in this area: some 50 countries either have or are developing a national or regional pollutant release and transfer register system;[3] the legal instruments for implementing the Globally Harmonized System of Classification and Labelling of Chemicals have entered into force in many countries; and the prior informed consent procedure is being implemented through the Rotterdam Convention. Chemical information networks at the international level have been established by relevant agencies and under multilateral conventions. These include the clearing house being developed and managed as part of the Strategic Approach to International Chemicals Management; the clearing house under the Basel, Rotterdam and Stockholm Conventions; the International Chemical Safety Cards, produced and updated by WHO and the International Labour Organization (ILO); and the Global Portal to Information on Chemical Substances, hosted by the Organization for Economic Cooperation and Development (OECD).

13. Although further information about chemicals has become available and more easily accessible since the holding of the World Summit on Sustainable Development, there is still significant room for improvement. At the eighteenth session of the Commission, it was highlighted in particular that the available information and data on chemical safety and toxicity, especially in national and local languages, is still insufficient. Furthermore, there is insufficient sharing of information about alternatives to toxic chemicals, which is especially important to developing countries and countries with economies in transition. In addition,

[3] See 2009 OECD survey regarding the implementation of Economic Commission for Europe (ECE) Recommendation C(96)41/Final, on pollutant release and transfer registers.

countries have insufficient capacity to interpret and utilize information on chemical safety and toxicity.

14. With respect to the ongoing work of implementing pollutant release and transfer registers, many countries pointed out that a lack of institutional capacity and deficiencies in terms of laboratory infrastructure are major barriers to the implementation of this instrument.

15. Another challenge identified at the eighteenth session of the Commission was the fact that there is insufficient information about the chemicals contained in products. The increasing presence of toxic chemicals in products poses risks to human health and the environment when the products are used and when they are recycled or become wastes. Products containing harmful chemicals have also become a global problem as a result of international trade; examples include children's toys, textiles, jewellery, electronics and furniture. Vulnerable groups such as children and pregnant women are at particular risk for exposure to a variety of harmful substances contained in products. Yet there is no global system for providing information to consumers and others about chemicals contained in products.

16. The second session of the International Conference on Chemicals Management, held in May 2009, identified chemicals in products as an emerging issue. In its resolution II/4, the Conference decided to implement a project to address the improvement of information relating to chemicals in products and encouraged stakeholders to provide support to the project, both in substantive and in resource terms.

17. The fourth meeting of the Conference of the Parties to the Stockholm Convention, held in May 2009, added nine new chemicals for elimination or restriction under the Convention, including industrial chemicals widely used in products and other articles.

18. If there is to be effective and efficient generation and sharing of information, cooperative action is needed at all levels to:

(a) Further implement the Globally Harmonized System of Classification and Labelling of Chemicals, establish national pollutant release and transfer registers, participate in and implement the prior informed consent procedure, make full use of existing international and regional information networks, and provide related training and technical assistance to developing countries and countries with economies in transition;

(b) Improve the knowledge, training, education and awareness of all national stakeholders, including experts, legislators, politicians, policymakers, farmers, workers, producing and manufacturing companies, and public and national organizations, with regard to the sound management of chemicals along the value chain;

(c) Implement the principle of "no data, no market" and integrate the acquisition, management and dissemination of information related to hazardous substances into the process of developing and marketing chemicals. Universal access to such information and knowledge is essential for the development of prevention and protection tools. This includes assessing the hazardous properties of

chemicals and strengthening screening and evaluation systems for new chemicals entering the market;

(d) Strengthen the community's right to acquire knowledge through product labels, environmental reports, environmental impact assessments, eco-audits, emission inventories and similar instruments. Data relevant to the health and environmental impacts of chemicals should be made available to the public;

(e) Disseminate information about the chemical content of products and the resulting impacts on human health. Further initiatives are needed to promote the responsibility of producers to provide clear and accessible information to the public on chemicals contained in products;

(f) Promote universal access to reliable information regarding hazardous substances through the adoption of a global system for communicating information about risks and hazards;

(g) Develop global networks to facilitate the sharing of good practices, methodologies, interventions, approaches and results of research to improve the management of hazardous substances;

(h) Strengthen the regional information exchange networks supported by UNEP;

(i) Strengthen the sharing of information between developed and developing countries, including research findings regarding chemical toxicity;

(j) Strengthen the exchange of information about safe and accessible alternatives to toxic chemicals.

C. Chemical safety and risk prevention and reduction

19. Chemical safety and risk prevention and reduction are crucial for reaping the benefits of chemicals without suffering their negative effects in terms of the environment and human health.

20. The main sources of chronic chemical pollution include the agricultural use of pesticides, releases resulting from energy generation and industrial activities, and obsolete stocks of outdated chemicals.

21. Vulnerable groups in developing countries, including children, women, indigenous people, the poor and workers, suffer disproportionate impacts as a result of high levels of chemical exposure from, inter alia, water, food, dwelling location and occupational circumstances, as well as lack of understanding with regard to the need to protect themselves and others from chemical risks.

22. The consumption of chemicals in developing countries is growing at a higher rate than that in developed countries and could account for a third of global consumption by 2020. Without sound chemicals management, this trend will lead to increased pollution and other negative effects produced by chemicals. Moreover, the risk posed by a chemical in one country may affect other countries, because of the potential that it will spread through the environment in the air, in water and in migratory species.

23. Many developing countries lack the basic legal, institutional and human capacities and knowledge needed for adequate chemical risk assessment and management. In many developing countries, increasing agricultural production is a top priority in development plans, which often leads to the increased use of pesticides. However, those development plans rarely contain provisions for the effective assessment and management of pesticides or alternative methods such as integrated pest management and organic production. Furthermore, in many cases, pesticides are imported illegally and repackaged without any labelling on proper handling, creating exposure risks for users.

24. In developing countries, a large proportion of the industrial activities involving chemicals are carried out by national companies and/or small and medium-sized enterprises. These companies and enterprises very often lack human and technical capacity to adopt the tools and methodologies for ensuring the protection of workers and the safety of processes and products used in larger-scale industries in developed countries.

25. At present, there is a lack of guidance with respect to the industrial uses of chemicals. Given the present trends, with increased production and use of chemicals in developing countries, the need for such guidance is becoming urgent. Countries need internationally agreed guidance and standards that are coherent, complementary, consistent and targeted to specific sectors.

26. It should be noted that small island developing States are increasingly vulnerable to the transboundary movement of hazardous wastes and chemicals that have land-based and ship-borne sources, primarily outside their exclusive economic zones. Given the ecological fragility of small island developing States, their high dependence on coastal and marine resources and their low environmental and socio-economic carrying capacities, the magnitude of the risks posed by such chemicals is greater for them than for others.

27. There are numerous tools for risk assessment and management. However, those tools have been created by the developed countries for their particular circumstances. Therefore, there is a need to adapt and develop assessment tools and methodologies that fit the national environmental, ecological and socio-economic conditions relevant to chemicals management in developing countries and countries with economies in transition.

28. The reliance of countries on hazardous chemicals has demonstrated the need to develop safe alternatives that can replace harmful chemicals, or alternative approaches that reduce the use and release of chemicals.

29. Effective policies and measures for chemical safety and risk prevention and reduction depend on a number of activities, such as:

(a) Increasing awareness about the importance of chemical safety among decision makers at the national and local levels, as well as the private sector, civil society and chemical users. This is a prerequisite for the placing of national priority on the development of measures necessary to prevent and reduce the negative effects of chemicals on the environment and human health;

(b) Establishing a functioning regulatory system that sets out rules for registration, evaluation and restriction in the use of chemicals. The system needs to cover the whole life cycle of chemicals, including production, transport, use,

recycling and disposal. Regulation of the marketing of chemicals is critical. The regulatory framework should incorporate the implementation and enforcement of international legally binding instruments, such as the ILO Conventions and multilateral environmental agreements on chemicals and waste, as well as voluntary standards and agreements such as the International Code of Conduct on the Distribution and Use of Pesticides;

(c) Developing legislation on liabilities and compensation for environmental damage as a supplement to the traditional legislative approach to chemicals management. The use of innovative market-based instruments could be considered, given their ability to help reduce the use of harmful chemicals;

(d) Strengthening national human capacity for the technical assessment and management of chemicals throughout their life cycle. This requires extensive training of staff, including enforcement officers, inspectors and customs officials;

(e) Developing the laboratory capacity necessary to monitor the presence and the effects of chemicals in the environment. This could be done through regional and subregional cooperation in order to decrease demands on individual national budgets;

(f) Intensifying activities to address existing stocks of obsolete chemicals that are polluting the environment. Countries need to design proactive strategies to prevent large stocks of chemicals from being accumulated in future when they are banned or taken off the market;

(g) Fostering industrial and academic research on safer alternative products and technologies to replace the use of hazardous chemicals and promote more sustainable approaches, such as integrated pest management and organic farming methods;

(h) Assessing existing methods at the international level for chemical risk assessment and management and adapting them to the needs of developing countries and countries with economies in transition. Here, the development of international codes and standards for industrial chemicals similar to the International Code of Conduct on the Distribution and Use of Pesticides should be considered. These initiatives could build on existing materials and approaches such as the Globally Harmonized System of Classification and Labelling of Chemicals and pollutant release and transfer registers, and could take into account national and regional experiences. Organizations participating in the Inter-Organization Programme for the Sound Management of Chemicals should consider working together to provide countries with such coherent guidance and standards for industrial chemicals.

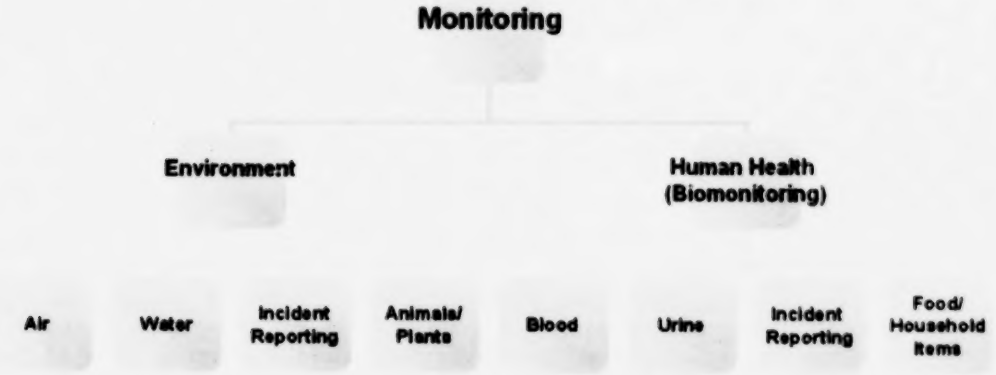
D. Monitoring

30. Given the huge quantities and varied characteristics of chemicals being produced, traded and used, it is not practicable to monitor all chemicals in the same way. The chemicals of most concern are those that are hazardous, that persist in the environment and that travel long distances in the environment from where they are released.

31. Most current monitoring programmes fall into two categories: those that monitor environmental impacts and those that monitor human health impacts

(biomonitoring). Environmental monitoring indicators include soil, air, water, incident reporting, animals and plants. Biomonitoring indicators include human milk, blood, urine, incident reporting, food and other household products. For example, a monitoring programme can consist of routine sample checks to determine the levels of heavy metals in raw materials such as meats.

Figure I
Indicators used to monitor chemicals



32. Information on monitoring methods can be found within forums and in scientific literature, including reports from WHO and UNEP. Most environmental monitoring information is accumulated through the International Society of Exposure Science and its publication, *Journal of Exposure Science and Environmental Epidemiology*. There is no centralized database of information on biomonitoring methods, but information and data on that topic are scattered among various sources. WHO, UNEP and other chemicals-related agencies and multilateral conventions, such as the Stockholm Convention, are involved in the monitoring of chemicals. The World Bank provides financial and human resource support for relevant programmes. Stakeholders such as non-governmental organizations are also involved in biomonitoring. For example, the European Centre for Ecotoxicology and Toxicology of Chemicals, a non-profit scientific association, provides guidance on the interpretation of biomonitoring data.

33. At the national level, there are major discrepancies between developed and developing countries in terms of the implementation of monitoring programmes. Equipped with allocated resources and analytical capacity, developed countries have undertaken extensive monitoring of chemical pollutants. For example, the European Monitoring and Evaluation Programme monitors and reports monthly mean concentrations of persistent organic pollutants in order to assess transboundary air pollution. The presence of chemical pollution has often been noted in developing countries, but effective monitoring programmes that generate meaningful data are often lacking. Moreover, there are differences between academic networks and Government networks for environmental monitoring; these could be better linked.

34. The overall challenges facing monitoring efforts include the following realities: monitoring the general effects of chemicals on human health and the environment is extremely difficult, as those effects might be altered by other effects;

there is a lack of monitoring of the potential risks posed by chemicals throughout their life cycle; there are insufficient monitoring data on the chemical contamination of environmental media and on human exposure; and there is a need to expand the current list of indicators.

35. Further efforts should be made to develop monitoring programmes that specifically address each point in the chemical life cycle. The policy options for the strengthening of monitoring efforts should include:

(a) Developing monitoring indicators further. This requires greater investment in technological advancements in terms of monitoring techniques and detection mechanisms, to make the monitoring of chemicals more accessible;

(b) Making better use of existing data and data extrapolation in the development of best practices, and increasing access to information gathered through monitoring. There is a need to develop a centralized database of information relating to each category of chemicals and best practices in monitoring them. There is also a need to bring together public health and environment experts and activities within the framework of a comprehensive integrated surveillance and monitoring system;

(c) Expanding monitoring programmes in a coordinated manner, and sustaining existing programmes with adequate resources. For example, the Global Monitoring Plan under the Stockholm Convention aimed at assessing levels of persistent organic pollutants needs to be sustained so that progress can continue to be evaluated;

(d) Strengthening regional or bilateral cooperative activities, as chemicals can travel long distances. Fruitful cooperation is exemplified by the Arctic Monitoring and Assessment Programme;[4]

(e) Increasing and sustaining analytical capacity in developing countries. Human resources can be strengthened through better communication among existing programmes in developed countries; centres and networks of expertise should be developed or strengthened and training programmes devised to improve expertise in developing countries. Programmes such as those involving intercalibration, aimed at enhancing quality assurance and quality control as well as facilitating the global comparison of data, should be promoted;

(f) Prioritizing specific chemicals to be monitored by comparing the effects of various hazardous chemicals.

E. Emerging issues

36. In addition to the traditional hazardous chemicals, a number of emerging issues are attracting great attention. In May 2009, the second session of the International Conference on Chemicals Management identified nanotechnology, electronic waste (e-waste), chemicals contained in products and lead contained in paint as emerging policy issues. Those issues are not sufficiently recognized or

[4] The Programme involves Canada, Denmark, Iceland, Sweden, Norway, Finland, the Russian Federation and the United States of America (Alaska).

addressed, and they pose existing or potential risks to human health and the environment.

37. At the eighteenth session of the Commission, particular concern was expressed about nanotechnology. Participants pointed out that too little is known about the potential risks of nanomaterials, which are already used in a wide range of domestic and industrial products and foods. The Royal Society of the United Kingdom of Great Britain and Northern Ireland recommended that, given the emerging evidence of serious nanotoxicity risks, nanoparticles should be treated as new chemicals and should be subjected to new safety assessments prior to their inclusion in consumer products.

38. E-waste is another major concern, particularly in developing countries. Although some work to address this emerging issue has been undertaken by various international organizations, in particular under the Basel Convention, more needs to be done, especially to minimize the use of hazardous chemicals in e-products.

39. Various governmental agencies are developing new testing methods to assess emerging health and environmental risks posed by chemicals. However, this work is being carried out mainly in the developed countries. At the eighteenth session of the Commission, there was a strong call for the strengthening of cooperative action, and this should involve developing countries. There was also an emphasis on the adoption of a precautionary approach in addressing emerging issues.

40. At its second session, the International Conference on Chemicals Management made some progress in this area. In its resolution II/4, the Conference endorsed the establishment of a global partnership on lead in paint and decided to implement a project to address the improvement of information relating to chemicals in products. With a view to the further consideration of issues in relation to electrical and electronic products, a workshop is to be convened for which the Conference invited stakeholders to provide expertise and resources. With respect to nanotechnology, the Conference, in the resolution, encouraged stakeholders to provide assistance to developing countries and countries with economies in transition to enhance the required capacity, invited stakeholders to work together on research and requested them to facilitate access to and share information. In addition, the Conference agreed to establish a contact group to discuss the institutional arrangements for its intersessional period, including those needed for future work on emerging policy issues.

41. The emerging issues merit concerted actions at all levels, including:

(a) Strengthening research and risk assessment with respect to the emerging issues in order to reduce the risks posed by chemicals, including new chemicals covered by multilateral environmental agreements, as well as the risks posed by e-waste and nanotechnologies;

(b) Utilizing the International Conference on Chemicals Management, the governing body of the Strategic Approach to International Chemicals Management, to focus attention and call for appropriate action on emerging issues as they arise and to forge a consensus on priorities for cooperative action;

(c) Supporting existing programmes and projects on emerging issues, such as the contact group of the Strategic Approach on emerging policy issues; the Strategic Approach workshop on electrical and electronic products to be held by the

secretariats of the Basel and Stockholm Conventions and the United Nations Industrial Development Organization; the partnership between UNITAR and OECD aimed at addressing awareness-raising and the development of capacities in developing countries and countries with economies in transition with regard to nanotechnology and manufactured nanomaterials; and the work done by OECD and the Inter-Organization Programme for the Sound Management of Chemicals on the management of perfluorinated chemicals and the transition to safer alternatives;

(d) Strengthening related information-sharing between countries.

F. Partnerships

42. The environmentally sound management of chemicals is reliant on the participation of all stakeholders. Decisions made with the involvement of relevant stakeholders, including non-governmental organizations, civil society and the private sector, are much more likely to be successfully put into practice. These actors provide not only access to a wide range of expertise, but also pertinent local information with which to assess policy options. They may carry out monitoring and data-collection efforts as well as community outreach, public education and awareness-raising activities.

43. However, the growing acknowledgement of the important role played by these stakeholders in chemicals policy and management has not been matched with efforts to permit their effective involvement in policy development processes. In some countries, there is a lack of Government support for public participation in the decision-making process, and resources provided for stakeholder-related activities are minimal or difficult to gain access to.

44. There is a need for strengthened partnerships between national Governments, the private sector, research institutions and civil society for the sound management of chemicals, as well as a need for greater financial, technical and capacity support for public-interest non-governmental organizations and civil society organizations in order to permit and facilitate their responsible and active participation in policy development processes. Here, future actions should include:

(a) Strengthening cooperation with civil society, academia and scientific societies and other stakeholders and encouraging their contributions to sound chemicals management;

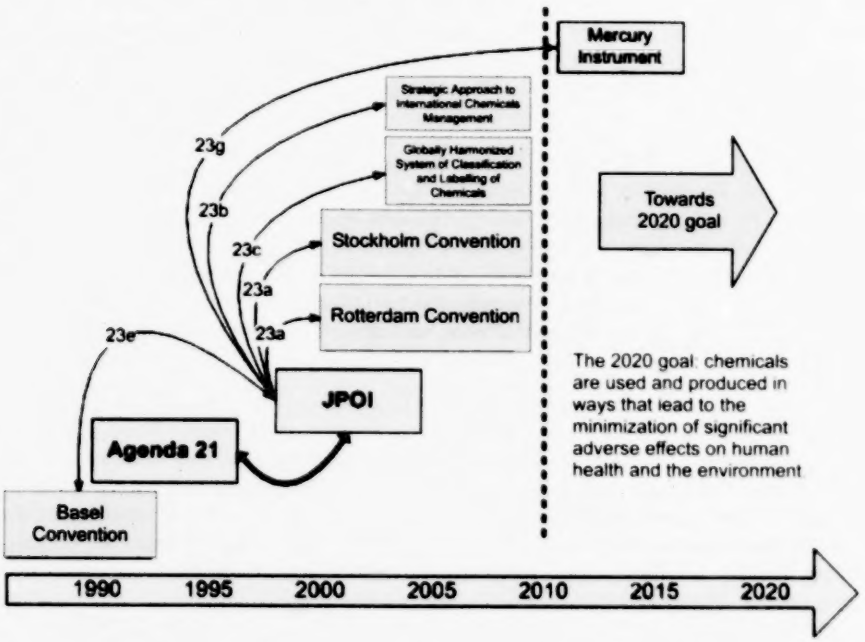
(b) Fostering public-private partnerships in order to strengthen the capacities of national industry and small and medium-sized enterprises for the safe and responsible use and handling of chemicals, including hazardous chemicals;

(c) Establishing partnerships to assess and communicate information about chemical risks and hazards, drawing on examples such as the Responsible Care Global Charter and the Global Product Strategy;

(d) Promoting the role of industry in information-sharing and implementing the precautionary approach to chemical safety; strengthening responsible advertising and marketing; and implementing the principle of "no data, no market" and mainstream practices aimed at corporate social and environmental responsibility in the chemical industry.

III. Strengthening the implementation framework and the enabling environment

Figure II
A clear vision: towards the 2020 goal



A. International policy framework: Strategic Approach to International Chemicals Management

45. The initial commitment to the implementation of the Strategic Approach to International Chemicals Management, as evidenced in high-level endorsements, the nomination of national focal points, preliminary progress reports and the extensive portfolio of Quick Start Programme projects, has been encouraging. Challenges to the full implementation of the Strategic Approach, which offers a non-legally binding international policy framework, include a lack of the resources needed for capacity-building, institutional strengthening and other activities, uneven engagement across key sectors, and the difficulty of monitoring progress on a continuous basis.

46. The financing of the secretariat of the Strategic Approach and the trust fund for its Quick Start Programme have been based on voluntary contributions, which are very sensitive to the priorities of donor countries and might change over time. At present, the major contributions to the Programme have been limited to a few donor countries or regional economic cooperation organizations. During the lifetime of the Strategic Approach, it will be a challenge to finance the necessary activities.

47. The Global Environment Facility has opened up a funding window for activities related to the Strategic Approach. However, this covers only a very small fraction of what is needed for the full implementation of the Approach.

48. The International Conference on Chemicals Management decided, upon the adoption of the Strategic Approach, that the trust fund for the Quick Start Programme would expire by 2013, with the last disbursement of funds to be made in 2012. However, the need for funds to support the sound management of chemicals under the Strategic Approach will not end at that time. A replacement for the Programme needs to be found, with a longer-term approach that is financially supported.

49. Recognizing chemicals as a cross-sectoral issue, the Strategic Approach to International Chemicals Management represents an attempt to move beyond the environment and to include all sectors relevant to sound chemicals management. This has been achieved only to a small degree at the international level, as the governing body of the Strategic Approach, the International Conference on Chemicals Management, is still dominated by ministries of the environment and health. Most of the other relevant sectors, including the development sector, are not represented at the Conference.

50. Existing mechanisms such as the Inter-Organization Programme for the Sound Management of Chemicals have proved effective in maintaining coordination in Strategic Approach-related activities at the international level and, increasingly, in partnerships boasting implementation and impact. However, the engagement of regional organizations and financial institutions has been uneven and insufficient. At the national level, the inter-ministerial committees encouraged in the Overarching Policy Strategy of the Strategic Approach have been established in some countries, but intersectoral coordination appears to be lacking in many cases.

51. As regards future policy options and measures for ensuring an enabling international environment for the sound management of chemicals, there is a continuing need to:

(a) Strengthen the international policy framework for chemicals, including through the full and effective implementation of the Strategic Approach to International Chemicals Management. The third session of the International Conference on Chemicals Management, to be held in 2012, will be the next major opportunity to take stock of Strategic Approach implementation and to renew momentum behind it, as well as to consider additional emerging policy issues;

(b) Further enhance coordination, coherence and synergies among existing institutions and processes relating to chemicals, including the coordination between the Commission and other bodies and agencies. The outcomes of the discussions of the Commission need to be transmitted to other forums dealing with chemicals;

(c) Consider and devote increased attention to the possible need for international structures to evolve or to be supplemented beyond the lifetime of the Strategic Approach, after 2020. This might include the possibility of developing a global structure for the implementation of policy actions regarding chemicals of concern and promoting a proactive approach to chemicals management. The discussion of such matters will likely figure prominently at the fourth and fifth sessions of the International Conference on Chemicals Management, to be held in 2015 and 2020, respectively. In the meantime, the nineteenth session of the

Commission; the international environmental governance process, including the meetings of the Governing Council of UNEP; and the United Nations Conference on Sustainable Development (Rio+20) may provide opportunities for initial debate.

B. International legal framework

52. Progress in the implementation of the legal agreements on chemicals and wastes, such as the Basel, Rotterdam and Stockholm Conventions, has been observed through a number of indicators, such as an increase in the number of ratifications, a good rate of transmission of national implementation plans under the Stockholm Convention, the number of new chemicals reviewed and listed under the Stockholm and Rotterdam Conventions, and import responses under the Rotterdam Convention.

53. A number of challenges continue to hamper the wider implementation of these international instruments at the national level. Difficulties faced by countries parties are related to the insufficient use of market-based mechanisms, inadequate legal and technical capacity, lack of access to affordable and safer technologies and alternatives, and, in particular, the need to prioritize and integrate chemicals strategies into national development plans.

54. The weakness of the regulatory infrastructure, in particular enforcement mechanisms for chemicals management in developing countries parties and parties with economies in transition, has been identified as among the major challenges to the implementation of the Conventions. In many of these countries, there is fragmented and inconsistent implementation of the legal framework which leads to a lack of cooperation and synergy among the legal agreements at the national level. In addition, access to adequate and sustainable financial resources remains one of the main barriers to the implementation and enforcement of the international legal instruments.

55. At the international level, the extraordinary meetings of the Conferences of the Parties to the Basel, Rotterdam and Stockholm Conventions on the synergies among the three Conventions, held in Bali in February 2010, recognized that the overarching goal of the Conventions is the protection of human health and the environment and the promotion of sustainable development, and that the objective of enhanced coordination and cooperation among the three Conventions will contribute to the achievement of that goal. The extraordinary meetings and the process of enhancing cooperation and coordination among the three Conventions provides an encouraging example for other parts of the global environmental agenda, demonstrating the fact that enhanced international environmental governance can take place within a cluster of related multilateral environmental agreements. Joint activities among the secretariats of the Conventions are being developed and implemented with the specific mandate to produce benefits for parties at the national level, which would enhance their ability to meet their obligations under the Conventions.

56. A general challenge for chemicals management and the related international legal framework is the limited number of chemicals covered by the international agreements. This is attributable to the fact that there must be an international consensus that chemicals have been proved to be unsafe and of global concern before they can be addressed at the international level. This in turn leads to long

negotiation periods between the establishment of the relevant scientific evidence and the taking of action, but is counterbalanced by the advantage of promoting strong information exchange and guidance with respect to the chemicals reviewed, including proven effects on human health and the environment, as well as potential alternatives to be introduced. The review process being carried out within the framework of the scientific committees related to the Conventions also encourages countries parties to take action on chemicals that have been carefully reviewed.

57. The delivery of timely and appropriate technical assistance and the transfer of technology are recognized as essential for the implementation of legal agreements at the national level on chemicals and wastes. Under a number of agreements, regional and subregional centres for capacity-building and technology transfer have been established and mandated to assist States parties in fulfilling their obligations under the Conventions. These centres offer assistance in a wide range of areas, such as research for the development and introduction of alternatives; laboratory capacity, including to assess risks posed by chemicals and to monitor levels of contamination; and the development of regulatory and enforcement schemes.

58. As regards future action towards an effective international legal framework for ensuring the sound management of chemicals, policy measures and actions should be taken to:

(a) Mobilize financial resources at all levels, both public and private, to support the ratification, implementation and enforcement of legal instruments for chemicals management and hazardous waste, especially the aforementioned Conventions;

(b) Integrate chemicals management and the implementation of the internationally legally binding instruments into national development plans in order to ensure bilateral and national funding for the implementation and enforcement of the Conventions, as well as catalyse initiatives and partnerships to enhance technical and financial assistance to developing countries, including support from industry;

(c) Foster cooperation and coordination among the three Conventions at the national level, and ensure national synergies in their implementation and enforcement. This could be achieved by revising the mandate of the national coordination mechanisms already established at the national level to include further collaboration among the ministries involved in the implementation of the Conventions and the overall chemicals agenda. In that regard, it would be important that the coordination mechanisms include the main economic and planning ministries in order to ensure their support for the implementation of the Conventions;

(d) Successfully implement the obligations pertaining to the chemicals newly listed in annexes A, B and C to the Stockholm Convention, including the nine chemicals added by the amendments that entered into force on 26 August 2010;

(e) Successfully ratify the Ban Amendment to the Basel Convention, which bans the export of hazardous wastes from annex VII countries (parties to the Basel Convention that are members of the European Union and OECD, as well as Liechtenstein) to non-annex VII countries (all other parties to the Convention) for final disposal and recycling;

(f) Successfully negotiate a globally legally binding instrument on mercury. At the beginning of 2009, the international community decided that, to complement

the existing legal instruments, a legally binding instrument on mercury would be developed. The goal is to develop such an instrument by 2013;

(g) Raise the awareness of the public and decision makers through initiatives such as the Green Customs Initiative and products free of persistent organic pollutants, and through international campaigns such as the Safe Planet Campaign.[5]

C. Means of implementation

59. The Strategic Approach to International Chemicals Management and the international legal agreements on chemicals and wastes recognized that the extent to which developing countries can make progress towards the sound management of chemicals and wastes, including to meet the 2020 goal of the World Summit on Sustainable Development, depends in part on the availability of financial resources provided by Governments and the private sector, as well as bilateral, multilateral and global agencies or donors. This issue was re-emphasized at the eighteenth session of the Commission, each meeting of the conferences of the parties to the chemicals and wastes Conventions and meetings of the International Conference on Chemicals Management.

60. The need for financial resources can clearly be seen in the projection of financial requirements, estimated at $9 billion,[6] for national implementation plans relating to the first 12 persistent organic pollutants included in the Stockholm Convention. These resource requirements, which far exceed the resources available for the Global Environment Facility, will need to be mobilized.

Stockholm Convention summary of full resource estimates for 68 parties in four regions

(Millions of United States dollars)

Region	*2004-2009*	*2010-2014*	*2015+*	*Regional totals*
Africa	836.85	729.11	502.08	2 068.04
Asia and the Pacific	2 088.64	3 430.40	676.80	6 195.84
Central and Eastern Europe	292.71	242.38	132.84	667.93
Latin America and the Caribbean	118.28	86.88	22.40	227.56
Period totals	**3 336.48**	**4 488.77**	**1 334.12**	**9 159.37**

Note: Reproduced from annex to UNEP/POPS/COP.4/27, "Assessment of funding needs for parties that are developing countries or countries with economies in transition to implement the Stockholm Convention for the period 2010-2014", p. 7.

[5] The United Nations Campaign for Responsibility on Hazardous Chemicals and Wastes (Safe Planet Campaign) is a global campaign led by UNEP and the Food and Agriculture Organization of the United Nations to ensure that the environment and human health are safe from toxic chemicals and wastes. More information can be found at http://www.facebook.com/safe.planet.

[6] This number does not take into account countries that have not yet ratified the Stockholm Convention or the persistent organic pollutants that have been added to it. Thus, while some numbers might be rough estimations, it is also true that not all the required data have been gathered.

61. At present, a disproportionately small portion of bilateral and multilateral funding is allocated for national efforts to ensure the sound management of chemicals, because such initiatives are rarely featured and mainstreamed as national priorities in development plans and national assistance strategies.

62. Owing to lack of funding, most developing countries do not have the technical and analytical capacities for the development, implementation and enforcement of chemicals management programmes. There is a lack of trained scientific, legal and administrative personnel, enforcement officers and customs officials. There is also a lack of the institutional structures, such as laboratories, necessary for the sound management of chemicals.

63. The means of implementation should be further strengthened in order to achieve the goal of sound chemicals management. Actions should include:

(a) Mobilizing financial resources at all levels, both public and private, to support the transition to the sound management of chemicals. Within the short- and midterm time horizons, specific proposals for new financing arrangements could include a multilateral fund for chemicals, such as that under the Montreal Protocol on Substances that Deplete the Ozone Layer, transforming the Quick Start Programme of the Strategic Approach to International Chemicals Management into a permanent funding arrangement during the lifetime of the Approach, as well as expanding the funding for the chemicals focal area of the Global Environment Facility. Over the long term, however, the sustainable funding of chemicals management must be provided through national funding. This implies both greater support for the mainstreaming of sound chemicals management into national development plans and strategies and the greater use of economic instruments to sustain national funding for chemicals-management-related policies and measures;

(b) Supporting the ongoing initiative[7] of the Executive Director of UNEP on a consultative process aimed at identifying financing options for the chemicals and wastes agenda;

(c) Strengthening regional and subregional centres for capacity-building and technology transfer established under the three Conventions;

(d) Fostering public-private, North-South and South-South partnerships to strengthen the capacities of national industry and small and medium-size enterprises for the safe and responsible use and handling of chemicals, including hazardous chemicals;

(e) Providing a coherent package of decision-making tools and guidance, along with a set of science-based economic arguments that make a convincing economic case for investing in the sound management of chemicals;

(f) Developing and transferring a technology of safe substitutes and developing capacity for the production of such substitutes, particularly in developing countries;

(g) Considering the establishment of a system to prevent the transfer of obsolete technologies to developing countries, and promoting the cooperative development of environmentally sound technologies;

[7] As adopted at the eleventh special session of the Governing Council/Global Ministerial Environment Forum, held from 24 to 26 February 2010 (decision SS.XI/8).

(h) Considering the establishment of an international mechanism, in collaboration with regional and subregional centres established under the Conventions, as well as regional offices of UNEP and the Food and Agriculture Organization of the United Nations (FAO), to support education and capacity-building for the sound management of chemicals aligned with the implementation of the Strategic Approach to International Chemicals Management and the three main Conventions on chemicals;

(i) Strengthening human and technical capacity for risk assessment, reduction and monitoring in both Government and public-interest organizations, and providing assistance to developing countries.

IV. The way forward

64. The projected growth in the production and use of chemicals, in particular in the developing world and in countries with economies in transition, is likely to result in greater negative effects on health and the environment if sound chemicals management is not put in place. The gap between policy formulation and practice needs to be closed at the international, regional and national levels.

65. Strong national infrastructures for the sound management of chemicals should be established. Countries need to mainstream the priorities of sound chemicals management into national development planning processes based on the Millennium Development Goals, and move forward in forming and strengthening their inter-ministerial committees with multi-stakeholder participation, appointing national focal points, and developing and implementing their national plans under the Strategic Approach to International Chemicals Management, the Rotterdam and Stockholm Conventions, and other chemicals-related instruments.

66. A life-cycle approach should be adopted, and the commitment to basic principles, such as the precautionary and "polluter pays" principles, "no data, no market", the public's right to know, and the progressive substitution of the most dangerous chemicals, should be strengthened.

67. There is also a need to seek and address interlinkages between chemicals and other environmental issues, such as climate change, biodiversity, land degradation and water resources, in order to reinforce the contribution made by global action aimed at sound chemicals management to the achievement of sustainable development.

68. Legislation requiring producers and importers to improve the safety of their products should be enhanced, together with the monitoring and enforcement of existing regulations. Information regarding chemicals contained in products should be improved.

69. The institutional capacity of national Governments to develop legislative and regulatory systems for the environmentally sound production and use of hazardous chemicals, including effective frameworks for the prevention of and preparedness for chemical accidents, should be strengthened.

70. Clear and concise indicators, including goals, targets and timelines for what countries want to achieve in terms of sound chemicals management, should be developed, with priorities spelled out clearly in national development plans.

71. Research into and the promotion of alternatives to toxic and persistent chemicals should be strengthened. Existing information concerning safe and accessible alternatives, such as guidance developed by the scientific committee related to the Stockholm Convention, should be widely disseminated to countries to assist them in developing and implementing their regulatory and enforcement frameworks.

72. Public health could be improved by emphasizing the need to fully engage the health sector in national, regional and international strategic approach forums and in national inter-ministerial processes. Strategies directed specifically at ensuring the health of women, children and workers should be developed.

73. Environmental and health sector managers should become more effective partners in the development planning process, including in the area of sound chemicals management, in terms of providing timely information and converting technical data into usable forms of information for decision makers.

74. The sound management of hazardous substances in the workplace is essential in reducing their impacts on the environment, workers and industry. Countries need to implement the main chemicals-related ILO Conventions, namely, the Chemicals Convention, 1990 (No. 170), and the Prevention of Major Industrial Accidents Convention, 1993 (No. 174).

75. With a view to enhancing the sharing and accessibility of information, the implementation of the Globally Harmonized System of Classification and Labelling of Chemicals by Member States remains a priority. The establishment of a global system for communicating information about risks and hazards is necessary. The flow of relevant information between developed and developing countries, including research findings on chemical toxicity, should be enhanced. The establishment of an international mechanism to support education and capacity-building aimed at sound chemicals management should be considered.

76. Chemical safety should become an important part of national policies. Highly hazardous pesticides should be addressed through the implementation of the International Code of Conduct on the Distribution and Use of Pesticides. A pesticide authorization system should be established at the national level. International codes and standards for industrial chemicals should be developed. Countries need to address existing stocks of obsolete chemicals while adopting proactive strategies to prevent the future development of stocks of such chemicals.

77. Increased cooperation between countries is needed to prevent the negative impacts of chemicals from being transferred from one region to another and to avoid a repetition of past mistakes. For that purpose, one option is to enhance the use of prior informed consent procedures between countries as provided for by the Rotterdam and Basel Conventions. The provision of technical assistance to developing countries and countries with economies in transition is a key. Countries should also build and strengthen their capacity to deal with poisonings and chemical incidents.

78. The link among chemical safety, risk prevention and reduction and sustainable development should be fully reflected in the funding decisions of bilateral development assistance cooperation agencies. Donors need to recognize and encourage chemical safety objectives as important elements of development cooperation. Meanwhile, countries need to fully integrate the objectives of sound

chemicals management into national plans and corresponding budgets. Expanding the funding for the chemicals focal area of the Global Environment Facility should be considered. A permanent and sustainable financial mechanism should be established to replace the Quick Start Programme trust fund of the Strategic Approach to International Chemicals Management.

79. The existing international instruments and programmes, including the key chemicals Conventions such as the ILO Chemicals Convention and the Stockholm, Rotterdam and Basel Conventions, should be fully implemented. Coherence and synergies among these instruments should be enhanced at all levels, including through coordination among focal points for the Conventions and the Strategic Approach to International Chemicals Management and through greater use of the regional centres established under the Conventions.

80. Actions on emerging issues, such as e-waste and nanotechnologies, should be strengthened, including through further cooperation on research, risk assessment and information-sharing between countries.

81. The international policy and legal framework for chemicals management should be further strengthened, including through the full and effective implementation of the Strategic Approach to International Chemicals Management, the successful negotiation of a globally legally binding instrument on mercury, the examination of the usefulness of broader chemical legal instruments, and the development of international structures for ensuring sound chemicals management after 2020.